

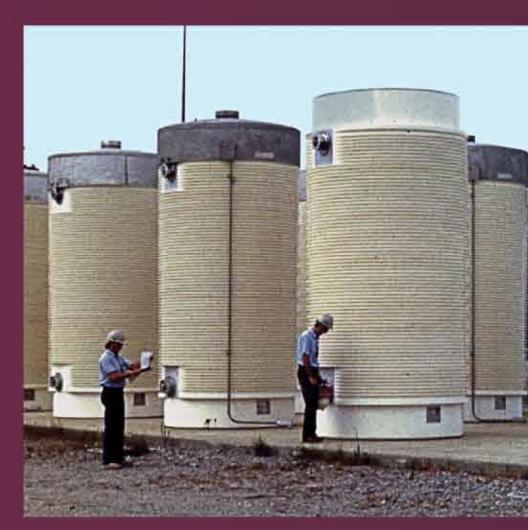


March 12-14













OFFICE OF NUCLEAR REACTOR REGULATION

Grow Your Own Probabilistic Risk Assessment Analyst Training and Qualification Program

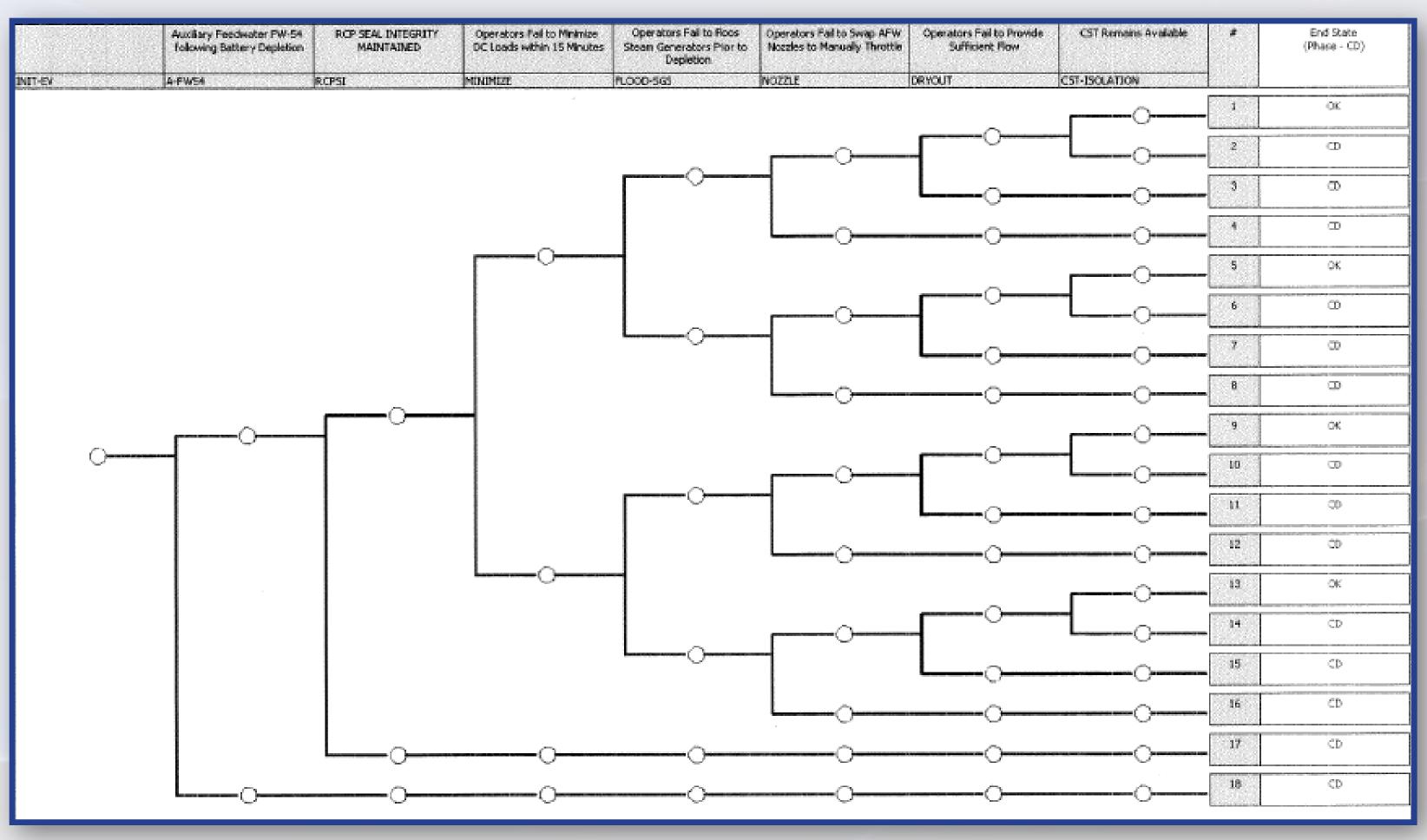
What is Probabilistic Risk Assessment?

PRA is a structured, analytical process for assessing a plant design in an integrated fashion. It uses engineering analysis, operations, and statistical methods.

Why does the NRC need PRA analysts?

The NRC needs PRA analysts to support existing risk-informed programs within the NRC as well as emerging activities resulting from various initiatives, such as addressing recommendations made by the Near Term Task Force review of the Fukushima Daiichi event, implementation of National Fire Protection Association (NFPA) Standard 805, and the new Level III PRA analysis.





The NRC is committed to expanding the use of PRA to improve safety decisionmaking and regulatory efficiency. The agency developed the "Grow Your Own Probabilistic Risk Assessment Analyst" program to support the continued use of PRA and to ensure the available expertise necessary to support various current and future risk-informed activities.

The PRA Analyst Training and Qualification program is an advanced training program formally structured to develop and certify qualified applicants as reliability and risk analysts.

What type of work do PRA analysts do?

- Provide safety perspectives on plant design and operation using probabilistic techniques to identify significant risk contributors and potential risk management strategies.
- Support inspection and enforcement programs by estimating the risk significance of licensee violations and performance deficiencies.
- Review and audit risk models and results of analyses that licensees rely upon as part of risk-informed licensing actions.
- Review required risk-informed submittals by vendors and applicants for new reactor licenses.
- Apply risk-informed methods to support resolution of regulatory issues.
- Support research programs in establishing detailed risk models for fire, flooding, and seismic hazards.

What are the program requirements?

In addition to work assignments, individuals selected for the program must successfully complete formal classroom training courses, learning projects, independent study activities (ISAs), on-the-job training activities (OJTs), and required rotations in PRA-related areas before certification.

Examples of formal classroom courses include:

- Risk- Informed Regulation for Technical Staff
- PRA Technology and Regulatory Perspectives
- Accident Progression Analysis

Examples of learning projects include:

- Perform a human reliability analysis
- Perform a thermal hydraulic analysis
- Develop event trees and fault trees for success criteria

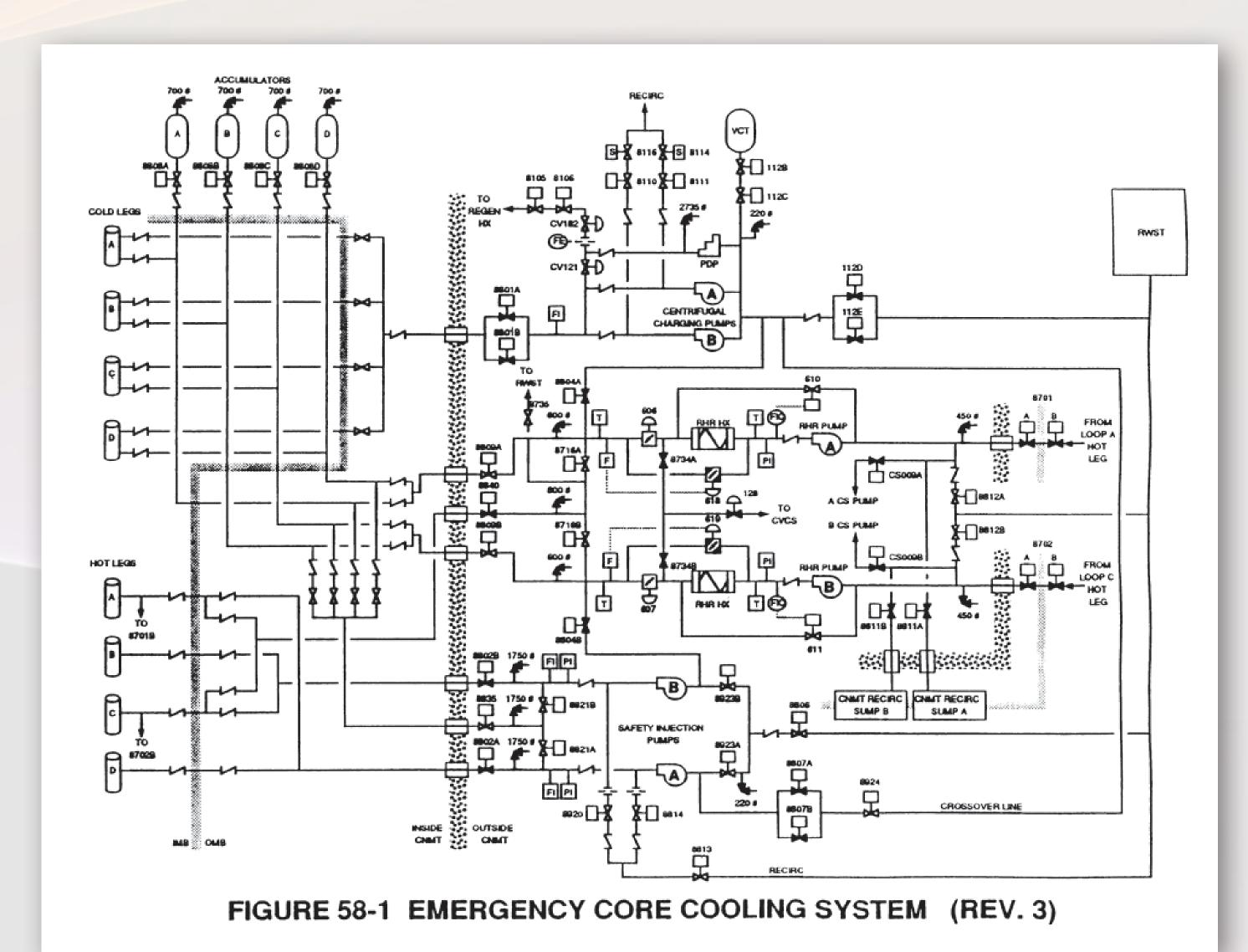
Examples of ISAs include:

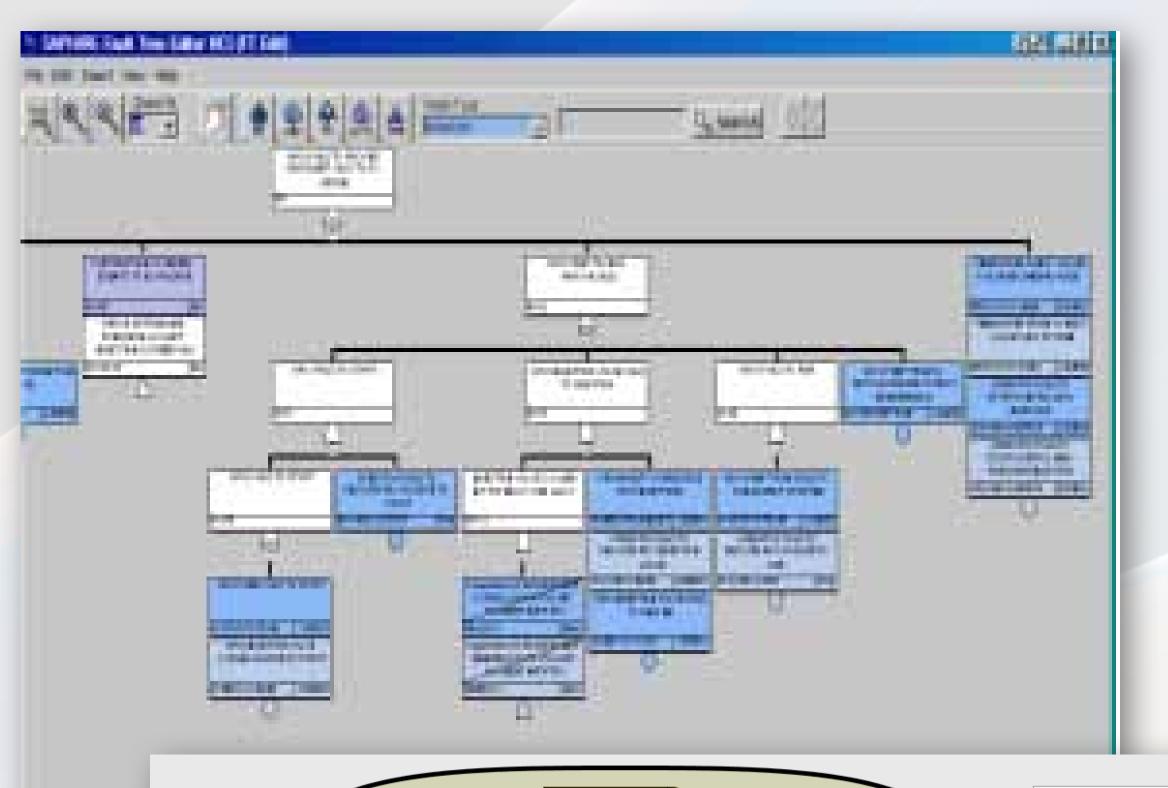
- Historical NRC Severe Accident Risk Evaluations
- Current Risk-informed Applications
- PRA Quality Initiative

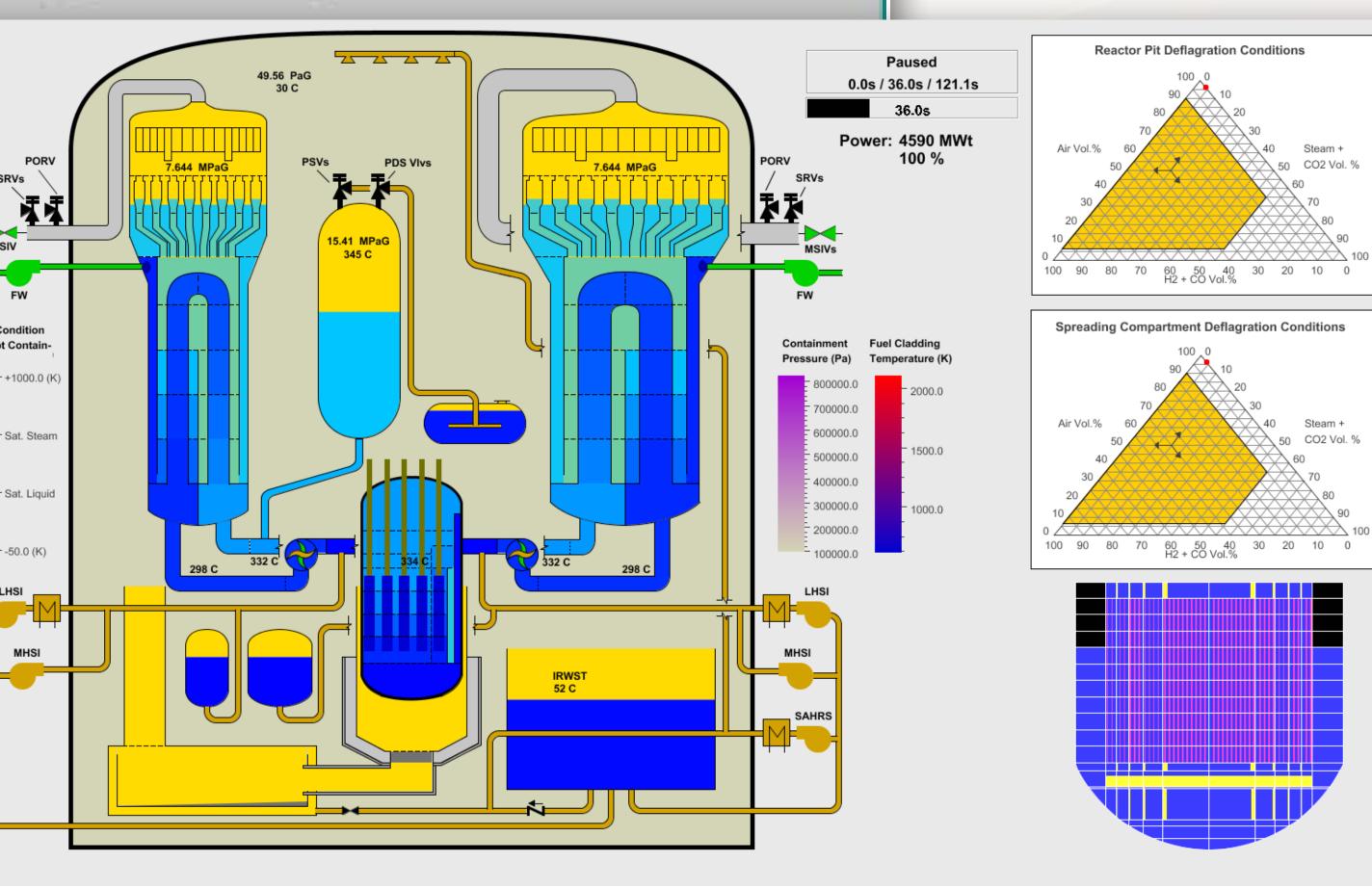
Examples of OJTs include:

- Rotation to site resident inspector office to work on PRA model development and use
- Conduct a phase 3 shutdown risk assessment

Upon satisfactory completion of all the required program elements, candidates must pass a PRA analyst qualification board. The board verifies that the qualifying individual has gained an acceptable level of knowledge and experience to be certified as a reliability and risk analyst.







What are the program prerequisites?

To be considered for the program, applicants must possess a baccalaureate degree or higher in an engineering discipline or general physical science. In addition, experience in the systems design and operation of commercial nuclear power plants is strongly preferred.

How long is the program?

Three years.

Where will the PRA analysts work after completing the program?

The training program is an agency initiative and any office that requires PRA expertise, such as NRR, NRO, RES, MSS, or regional offices, may select candidates.

